

Listing of Claims

This listing of claims will replace all prior versions and listings of claims in the application:

1-16. Cancelled.

17. (Original) A lawnmower comprising:

a frame;

an engine supported by the frame;

a mower deck supported by the frame;

a cutting implement disposed below the mower deck and rotationally driven by the engine;

a self-contained modular monitoring system for recording operational data of the lawnmower, the monitoring system including:

a microprocessor;

a memory;

an accelerometer for measuring impact force data of the lawnmower;

a signal conditioning circuit connecting the accelerometer to the microprocessor for transferring the impact force data, the signal conditioning circuit filtering the impact force data and providing filtered impact data that is scaled to parameters of the lawnmower, the filtered impact data being saved in the memory; and

a GPS receiver for collecting position data of the lawnmower, the GPS receiver being connected to the microprocessor and the position data being saved in the memory.

18. (Original) The lawnmower of claim 17, wherein the lawnmower comprises an electrical system including a power source and the monitoring system includes a power take-off for connecting the monitoring system to the power source of the lawnmower and providing power to the monitoring system.
19. (Original) The lawnmower of claim 18, wherein the monitoring system includes electrical sensors for measuring current, voltage and ambient temperature of the electrical system and transmitting data to the microprocessor regarding operation of the electrical system.
20. (Original) The lawnmower of claim 17, further comprising a user interface having a visual display and input buttons for interfacing with the monitoring system.
21. (Currently Amended) The lawnmower of claim ~~17~~ 20, wherein the user interface is operable to receive an operator identification and a job identification entered by an operator of the lawnmower, the operator identification and the job identification being saved in the memory.
22. (Original) The lawnmower of claim 17, wherein the monitoring system further comprises a cutting implement sensor for sensing operation of the cutting implement and transmitting data to the microprocessor regarding operation of the cutting implement with respect to time.
23. (Original) The lawnmower of claim 17, further comprising at least two wheels supporting the frame, the lawnmower being suspension-less and the wheels being fixed with respect to the frame in a vertical direction.
24. (Original) The lawnmower of claim 17, wherein the signal conditioning circuit includes a filter module comprises a resistor capacitor filter circuit having a cutoff frequency at 50Hz.

25. (Original) The lawnmower of claim 24, wherein the filter module comprises a weighed averaging module configured to generate a weighed average using the impact force data.
26. (Original) The lawnmower of claim 17, wherein the accelerometer measures impact forces in at least three directions.
27. (Original) The lawnmower of claim 17, wherein the monitoring system further comprises a communication module operable to transfer data from the monitoring system to an external device.
28. (Original) The lawnmower of claim 17, wherein the monitoring system automatically begins recording the output data and position data when the GPS receiver senses movement of the outdoor power implement.
29. (Original) The lawnmower of claim 17, wherein the monitoring system further comprises a time keeping device coupled to the processing module for measuring an operational time period the lawnmower is in operation, the monitoring system including a database of a maintenance time period for regularly scheduled maintenance and providing a maintenance indicator in response to the operational time period equaling the maintenance time period, the operational time period being saved in the memory.
30. (Original) The lawnmower of claim 29, further comprising a user interface including a visual display and input buttons for interfacing with the monitoring system, the user interface displaying the maintenance indicator and being operable to clear the maintenance indicator and reset the operational time period, the display of the maintenance indicator and the clearance of the maintenance indicator being saved in the memory.
31. (Original) The lawnmower of claim 29, wherein the monitoring system automatically begins recording the operational time period in response to operation of the lawnmower.
- 32-58. Cancelled.